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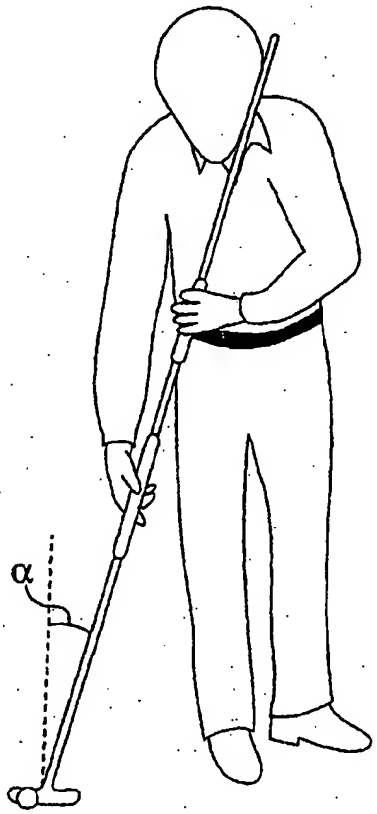
(54) Title: BLOCK PUTTER




(57) Abstract: A block putter, usable with either a conventional or sidesaddle putting stance for a right-handed or left-handed golfer, having a head width in the range of about one halfto about twice the width of a golf ball. The increased width and potentially increased weight of the putter head improve its performance both on the green and when hitting from the fringe, the fairway, or the rough, or out of the sand. The golfer may use the toe of the putter, rather than one of the faces, to strike the ball, for increased accuracy, especially on short putts. Alternatively, the golfer may putt in a sidesaddle stance with the traditional putter face using a putter having an elongated shaft. The elongated shaft is of such a length as to allow for the end of the shaft to rest on the golfer's shoulder and help stabilize the putt.

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# Block Putter

## Related Applications

The present application is a Continuation-in-Part of co-pending application number 09/874,658 filed June 4, 2001, which itself is a Continuation-in-Part of co-pending application number 09/851,050 filed May 8, 2001 which itself is a Continuation-in-Part of co-pending application number 09/650,563 filed August 30, 2000, the teachings of all of which are hereby incorporated by reference.

## Field of the Invention

The present invention relates to golf putters, and particularly to a golf putter usable with either a conventional or "sidesaddle" putting stance by a right-handed or left-handed golfer.

## Background of the Invention

Putting accounts for nearly half of the total strokes in a game of golf. Most golfers putt using a conventional stance in which the golfer addresses the ball, basically standing so he is facing at right angles to the line to the hole. Usually a golfer will choose the line of his putt while facing the hole, and then will turn about 90° to assume his stance. The act of turning can make it difficult to continue to see the line, which can cause putts, especially short putts, to be unsuccessful because they are not hit on the line.

In order to face the hole (or target on a breaking putt) during both the "lining up" and "execution" phases of the putting stroke, some golfers have adopted a "sidesaddle" putting stance. For this stance, the golfer stands to one side of the ball and faces the hole. (The precursor of the sidesaddle stance was the "croquet style" stance, in which the golfer stands astride the line from the ball to the hole and swings the club between his legs. This putting technique is now specifically forbidden by the U.S. Golf Association (U.S.G.A.) Rules of Golf, Rule 16-1e). **Figure 1** is a photograph of Sam Snead, perhaps the most famous golfer to use the sidesaddle stance.

In the sidesaddle stance, the golfer generally leans over the ball and tries to place his eyes in the vertical plane of the ball and the target. This is difficult with a conventional putter, because the putter is constructed so that the shaft is at an angle of at least 10□ to the vertical when the sole of the putter is on the ground. (This angle is required by Appendix II of the 2000-01 U.S.G.A. Rules, Part 1d(i), which states that "the projection of the straight part of the shaft on to the vertical plane through the toe and heel shall diverge from the vertical by at least 10 degrees"). The required angle also makes it difficult for a golfer to position his hands in the vertical plane of the ball and the hole.

In U.S. Patent No. 4,592,552, incorporated herein by reference, Garber discloses a putter designed to be used either in a conventional or sidesaddle stance. The putter has a head generally in the form of a right triangle, with two putting surfaces. A larger surface is intended to be used for longer putts in a conventional stance, and a smaller surface at right angles to the larger surface is intended to be used for shorter putts in a sidesaddle stance. As noted in U.S. Patent No. 6,039,657 to Gidney, the Garber putter design probably does not conform to the U.S.G.A Rules of Golf ("The clubhead shall have only one striking face, except that a putter may have two such faces if their characteristics are the same, and they are opposite each other," *Id.*, Appendix II, Part 4c). Furthermore, the asymmetry of the putter head makes it somewhat awkward to swing, since its center of mass may not lie along the line of the shaft. In addition, left-handed golfers must use a separate putter.

A need still exists for a putter having two identical putting faces opposite to one another that can conveniently be used from either a conventional or a sidesaddle stance, by both left-handed and right-handed golfers, and a method and device for sidesaddle stance putting that promotes a stable and consistent putting stroke.

## Summary of the Invention

In one aspect, the invention comprises a "block" putter having a shaft and a substantially symmetric head, where the head has a width in the range of about half the width of a regulation golf ball to about twice the width of a regulation golf ball. The club is preferably in conformance with the 2000-01 U.S.G.A. Rules of Golf, which are incorporated herein by reference. The head of the putter is more preferably

in the range of about ¾ times the width of a golf ball to about 1¼ times the width of a golf ball, and most preferably of about the same width as a golf ball. The sole of the putter may be curved from front to back, from side to side, or both. The shaft may be bent in the direction of the heel of the putter. The putter head may have a weight in the range of about 200 to about 500 grams, or preferably about 250 to about 350 grams. A vertical channel may be cut into the putter head (*e.g.*, to reduce weight). The shaft may have a length of at least about 40 inches, or at least about 48 inches. The putter may further comprise a weight disposed on the shaft. Such a weight may, for example, shift the center of mass of the putter to a point at or near the lower gripping hand in address position. Alternatively, the center of mass of the system of the putter and the swinging arm may be considered, and the weight may act to shift the center of mass of the system approximately to or above the position of the lower gripping hand, or approximately to the center of mass of the golfer's arm. The weight may have a mass in the range of about 50 to about 200 grams, or preferably in the range of about 100 to about 150 grams. The putter may further comprise one or more grips. The grips may have a relatively large diameter, such as at least about 1 inch, or at least about 1¼ inches.

In another aspect, the invention comprises a pair of matched putters, one for practice and one for competitive play. The practice putter head has a width of less than about half the width of a regulation golf ball, while the competition putter head has a width in the range of about half the width of a regulation golf ball to about twice the width of a golf ball. The matched putters have substantially the same center of mass and radius of gyration about the shoulder of the golfer's swinging arm. The heads of the two putters may have substantially the same mass. The head of the competition putter is more preferably in the range of about ¾ times the width of a golf ball to about 1¼ times the width of a golf ball, and most preferably of about the same width as a golf ball. The heads of the two putters may have the same vertical cross-section, or may be of the same shape, except for their width.

In another aspect, the invention comprises a method of putting that includes addressing a golf ball in a sidesaddle stance, swinging a putter having an elongated shaft, and controlling the putter during the putting swing from at least three points of contact. Generally, the putter will have a length between 40 and 84 inches such that

the shaft of the putter extends above the shoulder of the golfer. The golfer grasps the putter with both hands and further stabilizes the putter by resting the elongated shaft on his shoulder.

## Brief Description of the Drawing

The invention is described with reference to the several figures of the drawing, in which,

**Figure 1** is a photograph of Sam Snead in a sidesaddle putting stance;

**Figures 2A-2C** show the most common styles of putter heads;

**Figure 3** is a perspective view of a putter head according to the invention;

**Figures 4A** and **4B** are front and side views of a putter head according to the invention;

**Figures 5A** and **5B** show ball position relative to the putter head for the conventional and sidesaddle stance according to the invention;

**Figures 6A - 6E** show a golfer addressing the ball in a sidesaddle stance with putters having increasing shaft lengths according to the invention;

**Figures 7A** and **7B** show putters having widened grips according to the invention;

**Figure 8** shows a shaft having a bent neck;

**Figures 9A** and **9B** show a front view of a traditional sidesaddle putting stance and of a novel putting stance according to the invention;

**Figure 10** shows a lightweight block putter head design; and

**Figure 11** illustrates the dimensions of a putter head according to the invention.

## Detailed Description

"A putter is a club with a loft not exceeding ten degrees designed primarily for use on the putting green." *Id.*, Appendix II, Part 1a. Putter heads come in three primary styles: blade putters, mallet putters, and perimeter weighted putters. **Figure 2A** shows a blade putter that has symmetrical flat faces and may be used in either a right-handed or left-handed putting stance, as well as an asymmetric blade putter. **Figures 2B** and **2C** show mallet putters and perimeter weighted putters, respectively, which may be asymmetric and which do not have the opposing identical faces of the

first blade putter of **Figure 2A**. A novel "block" putter head according to the invention is shown in perspective view in **Figure 3**, and in front and side views in **Figures 4A** and **4B**. From the side, the block putter head has a shape and curvature similar to that of a conventional blade putter, but the head is substantially wider. It is bilaterally symmetric like a blade putter, with two identical parallel putting faces. Traditionally, a blade putter is relatively narrow. Most commercially available blade putter heads have a thickness ranging from ¼ to ½ inch. However, I have found that a wider (and usually heavier) block putter head promotes a smooth conventional putting motion that needs only a short backswing.

My new putter can be used in a conventional putting orientation shown in **Figure 5A**, or in the novel orientation shown in **Figure 5B**. I have found that remarkable control, especially for short putts, can be achieved by a sidesaddle stance with the putting orientation shown in **Figure 5B**, because the golfer can easily see the ball and the hole from the address position shown in **Figures 6A, 6B and 6C**. The width of the putter allows it to be easily used in this novel fashion. The width of my putter is preferably in the range of about ½ to 2 times the minimum diameter of a regulation golf ball (1.68 inches), more preferably in the range of about ¾ to 1¼ times the minimum diameter of a regulation golf ball, and most preferably about the same width as the minimum diameter of a regulation golf ball.

The shaft of the putter may either be of the more common length shown in **Figure 6A**, or may be longer as shown in **Figures 6B - 6E**. Some golfers find that the longer length shown in **Figure 6B** gives more control, especially when putting in the sidesaddle stance. In an alternative embodiment, as shown in **Figures 6C - 6E**, the shaft can extend beyond the shoulder of the golfer, perhaps by 3 to 12 inches. This would allow the golfer to rest the shaft against his shoulder and achieve greater stability of the putter and a better putting stroke. The stability arises because there are three points of control: each hand and the point where the shaft rests on the shoulder. A better putting stroke arises because if the hands operate such that the shaft continues to touch the shoulder at the designated point throughout the stroke, it is been found to be virtually impossible to bend or "breakdown" the wrists. Breakdown of the wrists results in an inconsistent putting stroke and can also be a source of the "yips" – a sudden and seemingly uncontrolled lunging at the ball with the putter. A

putter according to the invention helps achieve a truer pendulum stroke and eliminates or ameliorates the problem of wrist breakdown and yips.

The advantages of the sidesaddle putting stance and elongated (or extended) shaft with multiple control points are seen both in the novel toe-putting style (see **Figure 5B**) and the conventional face-putting style (see **Figure 5A**). **Figure 6C** illustrates the use of the invention with an elongated shaft when putting with the toe of the putter. **Figure 6D** illustrates the use of the invention with an elongated shaft when putting more conventionally with the traditional face of the putter. When used in the manner shown in **Figure 6D**, the projection of the straight part of the shaft onto the vertical plane through the toe and heel (shown as angle □) should be at least 10 degrees as required under Appendix II of the 2000-01 U.S.G.A. Rules, Part 1d(i). It should be noted that in this configuration, the plane containing the angle of the shaft with respect to the vertical axis is perpendicular to the target line. While conforming to the angle regulation for the shaft, a golfer may potentially tilt the putter within the plane perpendicular to the target line so that some or all of this angle disappears. Unlike with toe-putting, the putter and putting style shown in **Figure 6D** will depend on the "handedness" of the player.

**Figure 6E** illustrates an alternative embodiment for the use of the invention in which the point of shoulder contact and the extension of the elongated shaft occurs at the golfer's shoulder farthest from the golf ball during a putting swing, as opposed to the shoulder nearest to the golf ball. A golfer is free to determine which shoulder is most suited for any particular putt. This embodiment is equally applicable to toe-putting or conventional putting with the traditional face of the putter. In a preferred embodiment, the angle □ shown in **Figure 6E** can be between 10 and 45 degrees.

The putter head shown in **Figures 6D and 6E** need not have two parallel hitting surfaces. In fact the putter head used in this configuration can encompass any putter head and in particular any putter head that meets USGA specifications. In addition, the projection of the straight part of the shaft onto the vertical plane along the intended line of play can be customized depending on desired ball placement within the allowed angle of plus or minus 20 degrees

The U.S.G.A. 2000-01 Rules, Appendix II, Part 3, govern grips for golf clubs. Grips may be tapered, but must not have any bulges or waists. Unlike other clubs,

putters' grips may have a non-circular cross section, as long as the cross-section is symmetrical, had no concavity, and remains similar throughout the grip. Putters are also allowed to have two grips, as long as both are of circular cross-section. Finally, the grip for any club has a maximum diameter of 1.75 inches.

A putter according to the invention may have two grips, as can be seen in **Figures 6B - 6E**. In addition, I have found that a wider than normal grip limits the use of the small muscles of the hand while putting, and thus may make it easier for the golfer to maintain a consistent putting technique. Putters according to the invention thus may have grip diameters of 1-1½ inches or more.

Further, accuracy (especially when putting with the toe of the putter) can sometimes be enhanced by choosing the diameter and shape of the grip so that it contacts the forearm of the swinging arm. For a two-grip putter, it may be desirable to make the lower grip with a relatively large circular cross-section so that the putter can be "braced" against the forearm of the swinging arm, as shown in **Figure 7A**. For a one-grip putter, the grip may also have a flat side where it rests against the arm, to further enhance its stability, as shown in **Figure 7B**. This stability again helps to improve the putting stroke, for example, by preventing wrist breakdown and yips.

The U.S.G.A. Rules of Golf provide that the shaft of the putter must form a 10° angle with the vertical when the sole of the putter is flat on the ground. This 10° angle can be mitigated somewhat by taking advantage of Rule 2(c) of Appendix II of the Rules, which states that "[t]he shaft shall be straight from the top of the grip to a point not more than 5 inches above the sole, measured from the point where the shaft ceases to be straight along the axis of the bent part of the shaft and the neck and/or socket." **Figure 8** shows the novel putter with a bent neck that minimizes the horizontal distance between the hands and the head of the putter.

A golfer who putts from a sidesaddle stance using a face of a conventional putter finds it difficult, if not impossible, to place his hands in the vertical plane of the ball and the hole, as shown in **Figure 9A**. By rotating the putter to use its toe, the golfer's hands are brought into the vertical plane of the ball and the hole, as shown in **Figure 9B**. Because the putter is symmetrical, it can be used by either right handed or left handed golfers with equal facility. The symmetrical shape of the block putter head also enhances the accuracy of the putter in putting with the toe, since the center

of mass is lined up with the vertical plane of the hands, the ball, and the hole. The added mass makes this putter particularly effective when putting from the fringe, fairway, or rough, or from a sand trap.

The sole of the putter is preferably biaxially curved, as shown in **Figures 3** and **4**. The curve of the sole helps prevent the putter from digging into the green as the club is pulled back for the backswing before the putt (whether the orientation of **Figure 5A** or of **Figure 5B** is used). This curvature also makes the putter easier to use when putting from the fringe, fairway, or rough, or from a sand trap. The preferred sole shape will tend to vary from golfer to golfer; some golfers may prefer a flatter sole. The toe of the putter is also preferably curved, as shown in **Figures 3** and **4**.

To perfect the sidesaddle putting style, I have found it useful to practice with a traditional thin blade putter but to use a wider putter for competitive play. Using the narrower putter in practice helps train the golfer to hit the center of the ball with the center of the head when putting from the toe. Preferably the practice putter head and the competition putter head are made from different materials so that they may have substantially the same weight despite their different dimensions. This goal may also be achieved by making the competition putter hollow, or by drilling out a solid block. **Figure 10** shows a very lightweight block putter that may be used as the competition putter of a matched pair.

In certain embodiments it may be useful to make the putter head relatively heavy for added stability (*e.g.*, a brass head weighing about 300-500 g). Especially when using a putter with a heavy head and a long shaft, it can be useful to add weight (*e.g.*, about 50-200 g) to the shaft to shift the center of mass upward. I have found that this improves the balance of the putter. While weight can be added in whatever location suits the individual golfer, one particularly useful embodiment involves a weight that moves the center of mass of the combined system of the club and the golfer's swinging arm to (or above) the position of the lower gripping hand. Alternatively, the center of mass of this system can be positioned at the center of mass of the arm alone, or the center of mass of the putter alone can be placed at the position of the lower gripping hand.

## Example

Figure 11 shows the dimensions of a particular block putter head according to the invention. This putter head performs well for both conventional and sidesaddle stances. These dimensions are given by way of example only, and may be varied as necessary to suit the needs of a particular golfer. In particular, appropriate widths, as discussed above, vary from about ½ the diameter of a regulation golf ball to about twice the diameter of a regulation golf ball, with widths in the range of ¾ to 1¼ of the diameter of a golf ball being preferred. Lengths may vary from about 3-6 inches, with lengths of about 4-5 inches being preferred. It is also preferred that the length of the putter exceed the width, as required of all clubs by the 2000-01 U.S.G.A. Rules, Appendix II, Part 4b. The putter head should have a height sufficient to reliably strike the ball at a suitable point for putting. Some golfers find that the putter should strike slightly below the equator of the ball, as this can aid the ball in "lifting" out of its position in the grass, which can promote a smooth roll. In the embodiment shown, the putter head is about 1¼ inches high, and heights in the range of about ¾ to 1¾ inches are suitable for practice of the invention.

Other embodiments of the invention will be apparent to those skilled in the art from a consideration of the specification or practice of the invention disclosed herein. It is intended that the specification and examples be considered as exemplary only, with the true scope and spirit of the invention being indicated by the following claims.

What is claimed is:

1. A method of putting comprising:

addressing a golf ball in a sidesaddle stance;

swinging a putter having an elongated shaft;

controlling the putter during the putting swing from at least three points of contact.

2. The method of claim 1 wherein said elongated shaft has a length in the range from three to 12 inches above a golfer's shoulder.

3. The method of claim 1 wherein, said elongated shaft has a length between 40 and 84 inches.

4. The method of claim 1 wherein said at least three points of contact comprise:

the contact points of both hands, and

the contact point of the shaft on a golfer's shoulder.

5. The method of claim 4 wherein said shoulder contact point may occur at the golfer's shoulder closest to the golf ball during the putting swing or at the golfer's shoulder farthest from the golf ball during the putting swing.

6. A putter adapted for use in a sidesaddle stance comprising:

an elongated shaft; and

at least one grip disposed on said elongated shaft.

7. The putter of claim 6 wherein said elongated shaft has a length between 40 and 84 inches.

8. The putter of claim 6 wherein the elongated shaft extends beyond a golfer's shoulder such that the shaft may rest upon said golfer's shoulder during a putting swing.

9. The putter of claim 8 wherein said golfer's shoulder includes both the shoulder closest to a golf ball during the putting swing and the shoulder farthest from the golf ball during the putting swing.

10. The putter of claim 6 wherein said at least one grip comprises two grips disposed on the elongated shaft, wherein each grip is accessible by a golfer's hands during a putting stroke

11. The putter of claim 6 wherein said at least one grip comprises two grips disposed on the elongated shaft, wherein one grip is accessible by a golfer's hands and one grip is situated to rest on a golfer's shoulder during a putting stroke.

12. A block putter adapted for conventional and sidesaddle putting, comprising:
an elongated shaft; and
a substantially symmetric head disposed at an end of the shaft, the head having a width in the range of about 0.84 to about 3.36 inches.

13. The block putter of claim 12, wherein the head of the putter has a width in the range of about 1.26 to about 2.10 inches.

14. The block putter of claim 12, wherein the head of the putter has a width of about 1.68 inches.

15. The block putter of claim 12, wherein the putter head has a sole that curves from the heel to the toe of the putter.

16. The block putter of claim 12, wherein the putter head has a sole that curves from one side of the putter to the other.

17. The block putter of claim 12, wherein the elongated shaft is bent in the direction of the heel of the putter head.

18. The block putter of claim 12, wherein the putter head has a weight in the range of about 200 to about 500 grams.

19. The block putter of claim 12, wherein the putter head has a weight in the range of about 250 to about 350 grams.

20. The block putter of claim 12, wherein the elongated shaft has a length of at least about 40 inches.

21. The block putter of claim 12, wherein the elongated shaft has a length of at least about 48 inches.

22. The block putter of claim 12, wherein the elongated shaft has a length of between 40 and 84 inches.

23. The block putter of claim 12, wherein the elongated shaft extends beyond a golfer's shoulder such that the shaft may rest upon said golfer's shoulder during a putting stroke.

24. The block putter of claim 12, further comprising a weight disposed on the elongated shaft.

25. The block putter of claim 24, wherein the weight is positioned on the shaft in such a manner that the center of mass of a system including the putter and an arm of a golfer gripping the putter is located approximately at or above the position of the lower gripping hand when the putter is in address position.

26. The block putter of claim 25, wherein the weight is positioned on the shaft in such a manner that the center of mass of a system including the putter and an arm of a golfer gripping the putter is located approximately at the position of the lower gripping hand when the putter is in address position.

27. The block putter of claim 25, wherein the weight is positioned on the shaft in such a manner that the center of mass of a system including the putter and an arm of a golfer gripping the putter is located approximately at the position of the center of mass of the arm alone when the putter is in address position.

28. The block putter of claim 24, wherein the weight is positioned on the shaft in such a manner that the center of mass of the putter is located approximately at the position of the lower gripping hand when the putter is in address position.

29. The block putter of claim 24, wherein the weight has a mass in the range of about 50 to about 200 grams.

30. The block putter of claim 24, wherein the weight has a mass in the range of about 100 to about 150 grams.

31. The block putter of claim 12, wherein the putter head defines a vertical channel extending from the top of the head to the sole.

32. The block putter of claim 12, further comprising a grip disposed on the shaft, the grip having a diameter of at least about one inch.

33. The block putter of claim 12, further comprising a grip disposed on the shaft, the grip having a diameter of at least about 1¼ inches.

34. The block putter of claim 12, further comprising two grips disposed on the shaft.

35. The block putter of claim 12, further comprising a grip disposed on the shaft, the grip arranged to contact the forearm of an arm gripping the putter.

36. The block putter of claim 35, wherein the grip has a noncircular cross-section and comprises a substantially flat area where it contacts the forearm.

37. A matched pair of putters, comprising

a practice putter, comprising a first substantially symmetric head disposed at an end of a first elongated shaft, wherein the first head has a width of less than about 0.84 inches; and

a competition putter, comprising a second substantially symmetric head disposed at an end of a second elongated shaft, wherein the second head has a width in the range of about 0.84 to about 3.36 inches,

wherein the practice putter and the competition putter have substantially the same center of mass and substantially the same radius of gyration about the shoulder of a golfer holding either putter in address position.

38. The matched pair of putters of claim 37, wherein the first head and the second head have substantially equal weights.

39. The matched pair of putters of claim 37, wherein the second head has a width in the range of about 1.26 to about 2.10 inches.

40. The matched pair of putters of claim 37, wherein the second head has a width of about 1.68 inches.

41. The matched pair of putters of claim 37, wherein the first head and the second head have substantially the same cross section in a vertical plane.

42. The matched pair of putters of claim 37, wherein the first head and the second head have substantially the same shape but for width.

FIG. 1
Prior Art

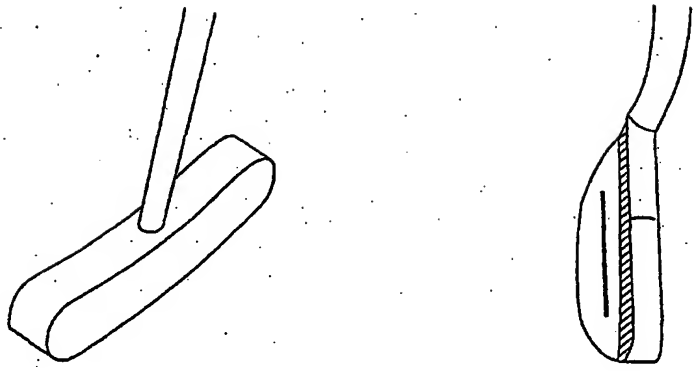

FIG. 2A
Prior Art

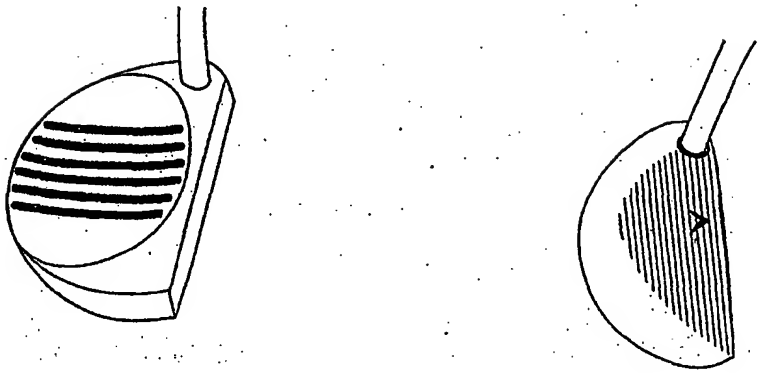

FIG. 2B
Prior Art

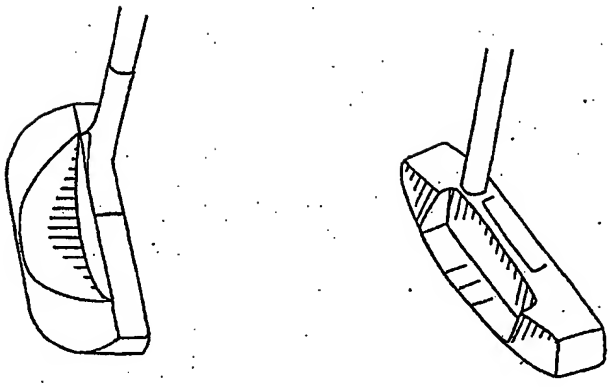

FIG. 2C
Prior Art

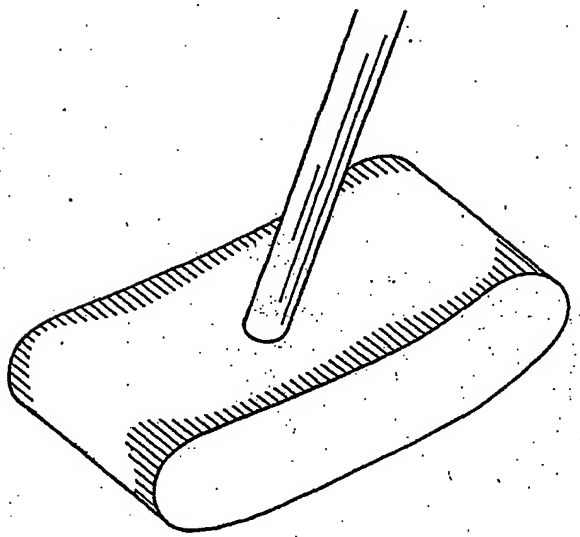

FIG. 3

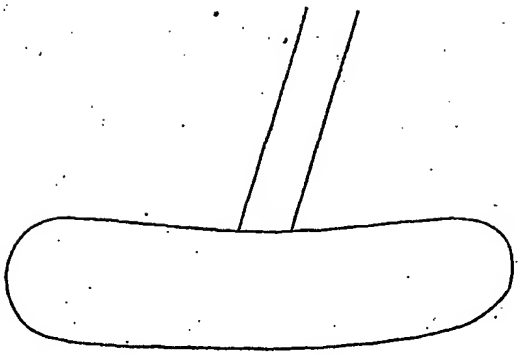

FIG. 4A

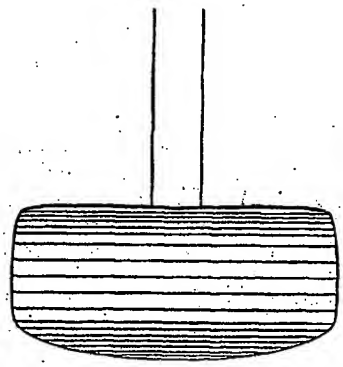

FIG. 4B

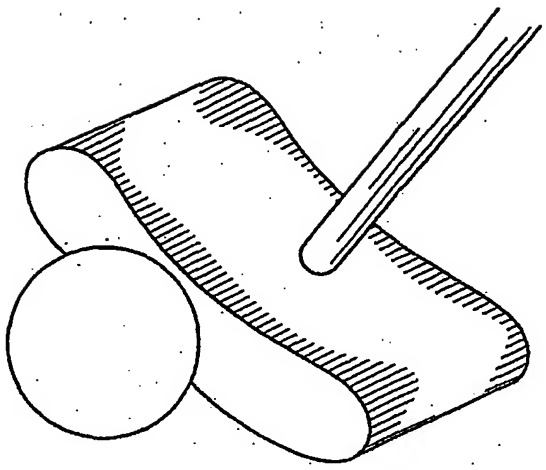

FIG. 5A

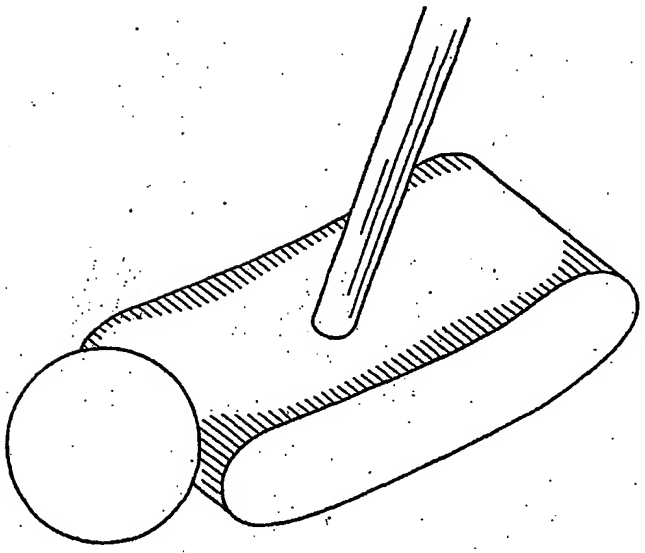

FIG. 5B

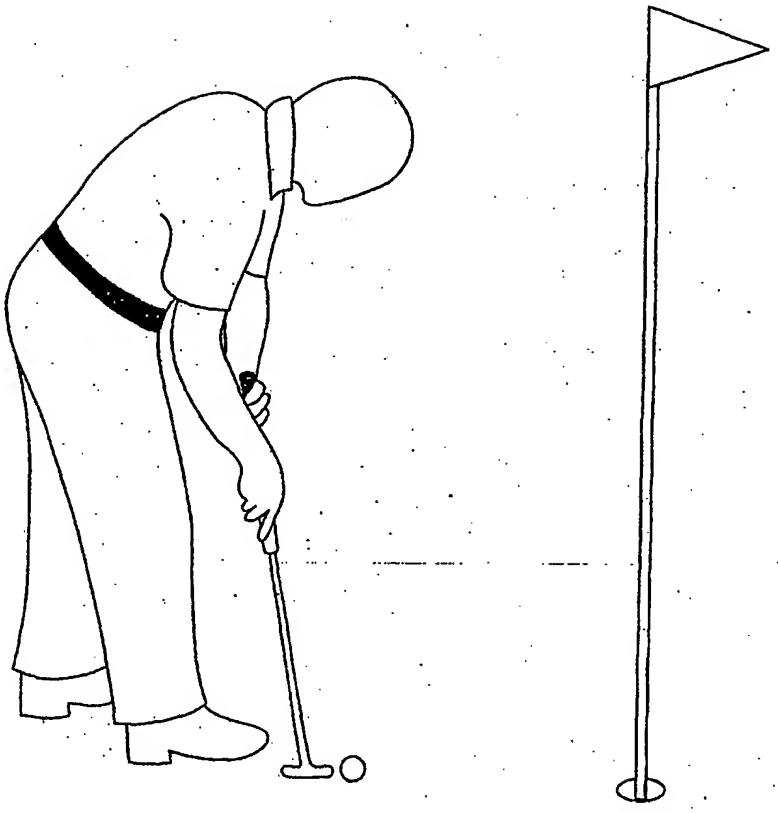

FIG. 6A

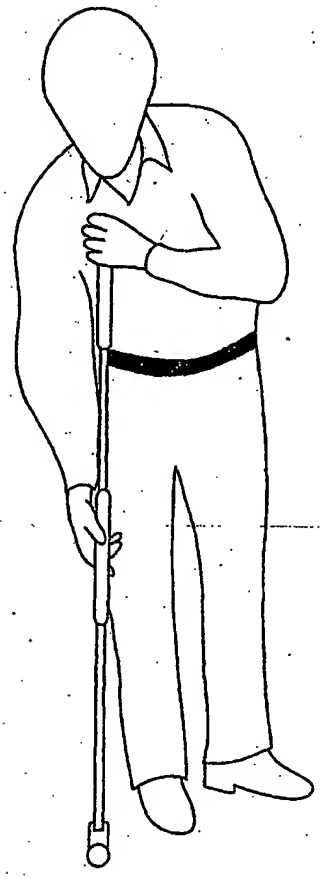

FIG. 6B

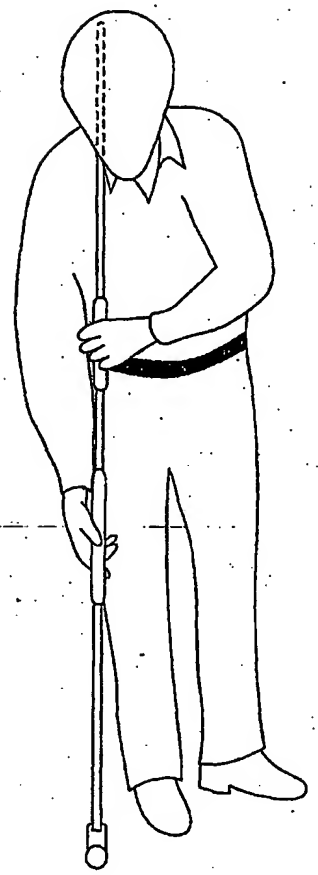

FIG. 6C

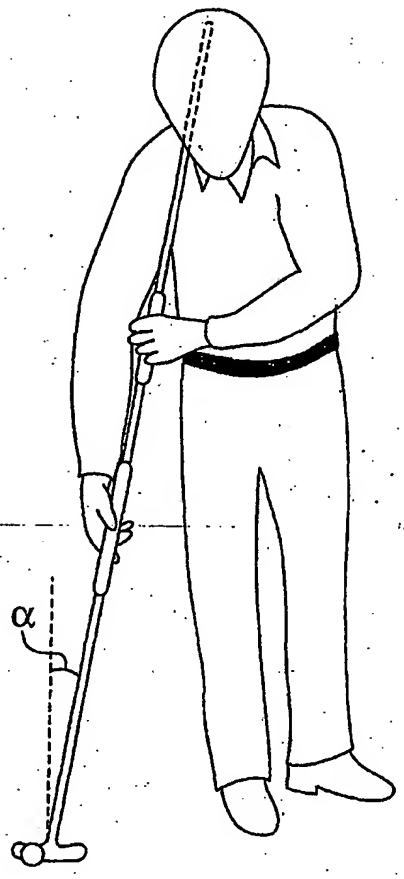


FIG. 6D

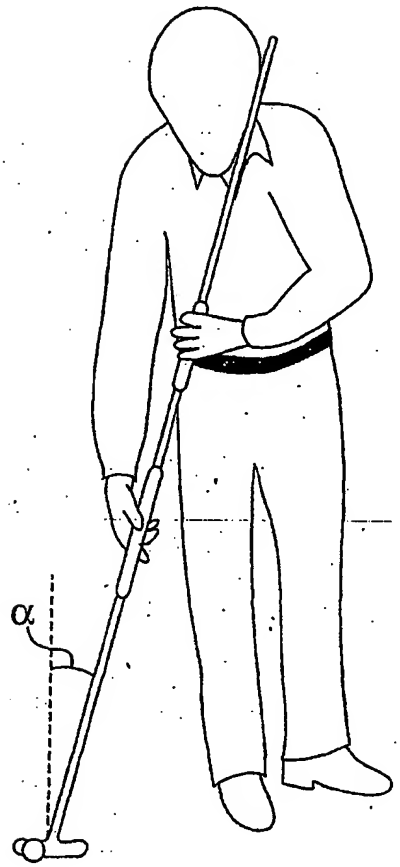


FIG. 6E

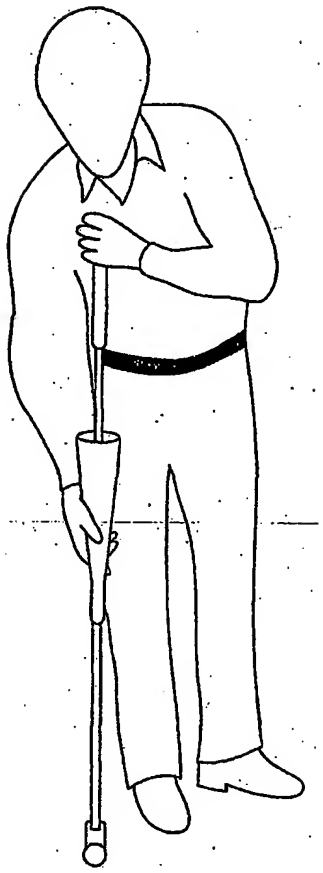

FIG. 7A

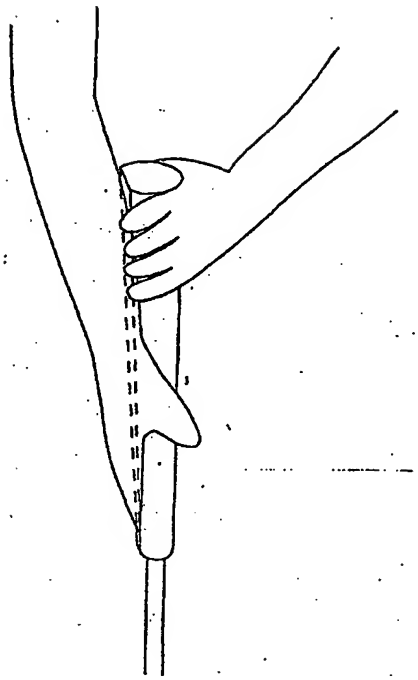

FIG. 7B

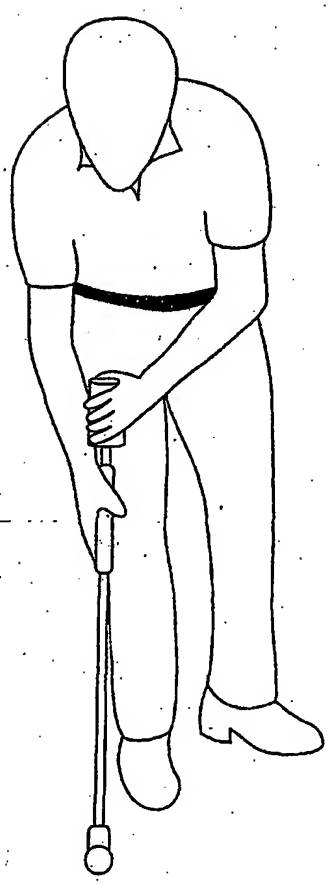

FIG. 7C

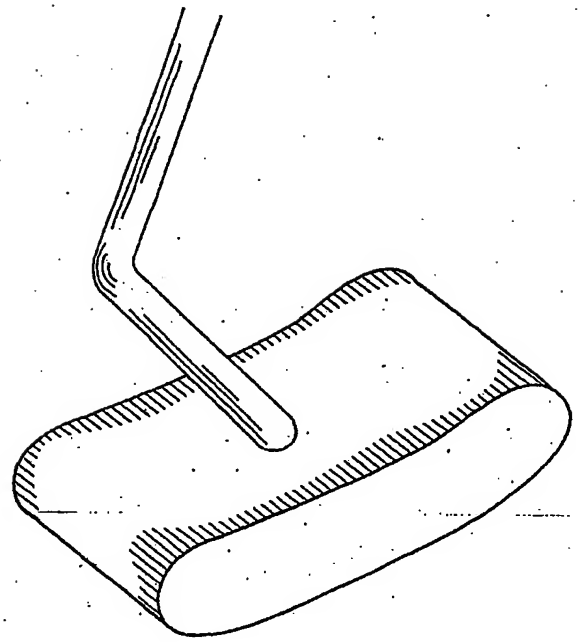

FIG. 8

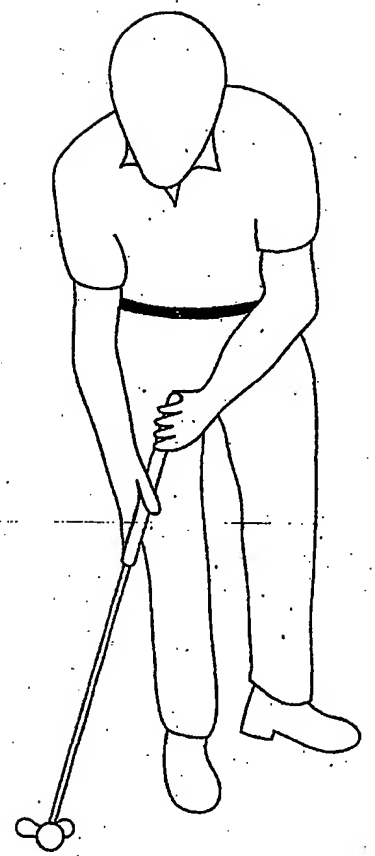

FIG. 9A

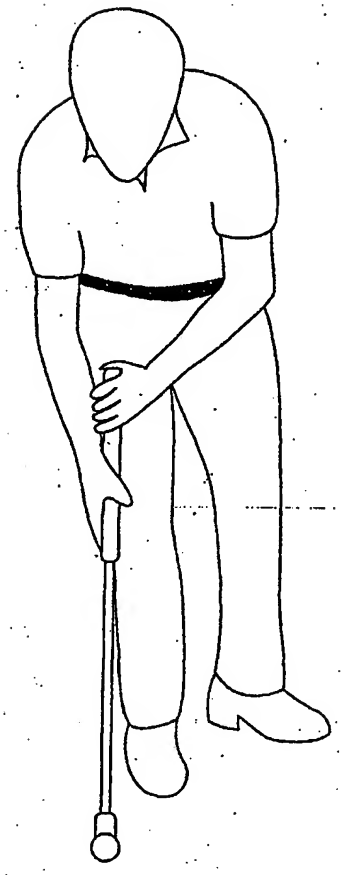

FIG. 9B

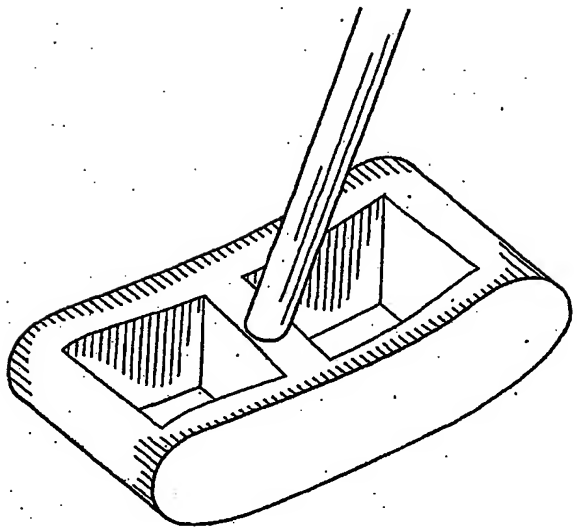

FIG. 10

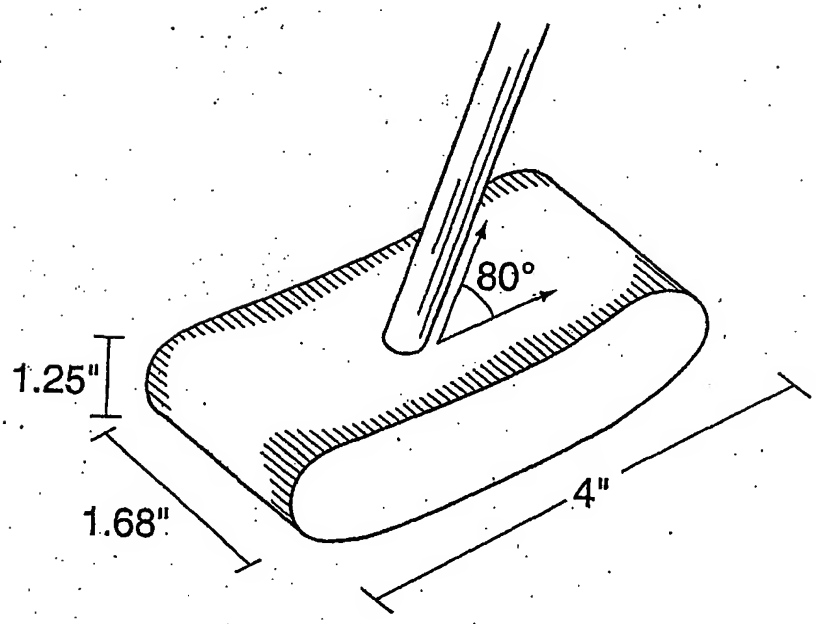


FIG. 11